

REMARKS:

Claims 1-13 are pending and stand rejected.

- 5 Claim 1 has been amended to better define the "graftable" compound. This amendment is supported on page 9, line 2 and page 10 lines 20-22 of the English translation of the Specification.

35 U.S.C. §112

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- Claims 1, 3, and 5-8 stand rejected under 35 U.S.C. §112 second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In particular, the Examiner objects to the "graftable" language. Applicant has amended the claims  
15 to remove the objectionable term.

Claim 6 stands rejected under 35 U.S.C. second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicant has amended claim 6 to note that the subscript  $n$  and the valence  $n$  are equal, and equal 1 or 2.

- 20 Claim 7 cites a graftable metal salt of claim 6 – and there is insufficient antecedent basis. Claim 7 has been amended to correct this objection.

35 U.S.C. §102

- Claims 1-3, 5-9, and 12 stand rejected under 35 U.S.C. §102(b) as being  
25 anticipated by Murphy (US 5,409,997). The Murphy reference fails to teach all of Applicant's claim elements, as amended, and therefore fails to provide a *prima facie* case of anticipation. Specifically, the Murphy reference fails to teach radiation grafting, and a fluoropolymer blended with a compound containing a single C=C double bond.

- 30 The Murphy reference describes a blend of a fluoropolymer and a coagent which is curable by radiation. (Col. 1, lines 8-11). This blend is then "exposed to ionizing radiation to effect cross-linking" (Col. 4, lines 56-60).

A crosslinking reaction (as in Murphy) is very different from a grafting reaction as claimed by Applicant. Grafting is a means for adding side chains or

groups to a polymer backbone, while cross-linking involves interpolymer linking of polymer chains, drastically increasing the polymer molecular weight.

Further, the Murphy crosslinking requires an agent having multiple functionality – for reacting with and linking two polymer claims. These difunctional agents include the preferred diacrylates, having two C=C bonds. (Col. 3, lines 34 to 36. Applicant's amended claim requires a single C=C bond for a grafting reaction.

The Murphy teaching of crosslinking using difunctional agents fails to teach or suggest Applicant's grafting using a compound containing a single C=C bond. Rather the Murphy reference teaches away from Applicant's claims.

### 35 U.S.C. §103

Claim 4 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Murphy. As described above, the Murphy reference teaching of crosslinking using difunctional agents fails to teach or suggest Applicant's claimed grafting reaction using a compound having a single C=C bond. Applicant states in the description:

“However, the presence of more than one double bond in the graftable compound may cause crosslinking of the fluoropolymer, and therefore a modification in the rheological properties, or even the presence of gels, which is undesirable. It may therefore be difficult to achieve a good level of grafting, while limiting crosslinking. Thus, graftable compounds containing only a single C=C double bond are preferred.” (Page 10, lines 14-23.)

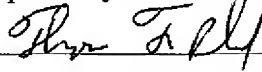
Thus the teaching of Murphy of a difunctional coagent not only fails to teach or suggest all of Applicant's claim limitations, but it teaches away from Applicant's amended claims.

Claims 10 and 11 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Murphy, in view of Cheng (US 4,935,467). As described above the Murphy teaching of crosslinking using difunctional agents fails to teach or suggest Applicant's claimed grafting reaction using a compound having a single C=C bond. The Cheng reference is cited as a secondary reference to show antioxidants in the amounts claimed by Applicant. The Cheng reference also teaches crosslinking, rather than Applicant's claimed grafting reaction, and thus fails to heal the deficiencies of the Murphy reference.

In view of the above, the Applicant believes that the reasons for rejection have been overcome, and the claims, as amended herein, should be allowable to the Applicant. Accordingly, reconsideration and allowance are requested.

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Respectfully submitted,

  
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